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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY **REGION IX**

75 Hawthorne Street San Francisco, CA 94105

November 4, 2004

Mr. Brian Mossman Safety, Health & Environmental Affairs **Boeing Corporation** 6633 Canoga Avenue Canoga Park, CA 91309-7922

EPA Response to Recent Boeing Correspondence; Renewed Request for Gage

Aquifer Monitoring Well Installation; Montrose Chemical and Del Amo

Superfund Sites and Former McDonnell Douglas Aircraft Parts Plant; Dual Site

Groundwater Operable Unit, Los Angeles County, California

Dear Mr. Mossman:

Thank you for your electronic mail correspondence to EPA dated October 12, 2004 ("email") regarding EPA's request that Boeing install and sample groundwater monitoring wells in the Gage Aquifer in the vicinity of the former McDonnell Douglas aircraft parts plant being redeveloped by Boeing Corporation ("Boeing") in Los Angeles. This request follows from EPA's ongoing implementation of a selected remedial action (cleanup) for groundwater at two federal Superfund Sites. In this letter EPA would like to explain why it does not agree with several of the positions and representations you have made in your email. EPA also requests that Boeing reconsider its current position with regard to installation of the Gage Aquifer monitoring wells.1

# Background

As you are aware, in the last six months, EPA has approached Boeing, along with the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB-LA") to discuss groundwater contamination originating from sources at the former McDonnell Douglas aircraft parts plant near 190th Street and Normandie Avenue in Los Angeles, and its relationship to the Montrose Chemical and Del Amo Superfund Sites. The McDonnell Douglas plant was located immediately north of the former Montrose Chemical DDT manufacturing plant at 20201 S. Normandie Avenue. Boeing merged with McDonnell Douglas Corporation after the plant ceased operations, and Boeing Realty Corporation (a wholly owned subsidiary of Boeing) has been engaged in the redevelopment of the former plant property ("Boeing property"). As we have discussed, Montrose Chemical Corporation ("Montrose") and Shell Oil Company ("Shell") are responding to EPA unilateral administrative orders to design a remedial action for groundwater

<sup>&</sup>lt;sup>1</sup>Please note that, other than the background section, this letter is intended to pertain only to issues related to Gage Aquifer contamination and the Gage Aquifer monitoring wells requested of Boeing in response to it.

that was selected by EPA in 1999<sup>2</sup>. EPA's work is proceeding pursuant to the Comprehensive Response, Compensation, and Liability Act of 1980, as amended ("CERCLA").

On May 12, 2004, I met with you and John Geroch at the RWQCB-LA offices and provided a visual presentation summarizing EPA's Dual Site Groundwater Remedy, our remedial design activities, and the results of the most recent 2004 Baseline sampling conducted by Montrose and Shell. At that time, I focused on the commingling and movements of aliphatic chlorinated solvent ("TCE")<sup>3</sup> contamination in groundwater from the Boeing property in relation to the chlorobenzene, benzene, and TCE plumes identified for remedial actions under the ROD. I explained the provision in the ROD for TCE containment. Finally, I raised the issue of TCE contamination in the Gage Aquifer downgradient of the Boeing contaminant sources, as this TCE contamination was moving *under* (that is, below) the former Del Amo plant site in a region of groundwater that was not subject to the technical impracticability waiver<sup>4</sup> provided in the ROD. Existing data we have reviewed are consistent with a TCE source from the Boeing property to the Gage Aquifer.

At the conclusion of the May 12 meeting, EPA requested that Boeing install monitoring wells in the Gage Aquifer along Normandie Avenue, to evaluate and better understand the contribution to the Gage Aquifer contamination from sources at the Boeing property, and to provide for monitoring its migration. We discussed at length the reasons why EPA believes the Gage wells are necessary.

During the summer 2004, EPA corresponded with Boeing on multiple occasions, primarily to facilitate Boeing's acquisition and analysis of publicly available groundwater data, and to provide Boeing with the newest data. EPA provided Boeing the contours and basic plume definition information and the full digital database of the baseline 2004 data for hundreds of wells in the Montrose/Del Amo monitoring well network. Boeing then requested, and EPA provided, the historical groundwater well data as well. Boeing also was provided the latest preliminary

<sup>&</sup>lt;sup>2</sup>EPA's Record of Decision ("ROD") (March 30, 1999) was entitled *Record of Decision for the Dual Site Groundwater Operable Unit* and addressed groundwater contamination at the Montrose Chemical and Del Amo Superfund sites. These sites are on the federal National Priorities List. The ROD and its supporting documentation have been publically available since 1999 and the ROD is available by download from the Internet. Boeing has informed EPA that it has a copy of the ROD.

<sup>&</sup>lt;sup>3</sup>For simplicity, the term "TCE" is used herein to refer to trichloroethylene, which is the most prevalent aliphatic chlorinated solvent in groundwater at these sites. It is recognized, however, that perchloroethylene, and various isomers of dichloroethylene, occur in groundwater and may be associated with the Boeing property and/or other contaminant sources.

<sup>&</sup>lt;sup>4</sup>The ROD contains a provision which waives the requirement to clean groundwater in-situ to drinking water standards at the Montrose Chemical and Del Amo Sites within a specified area called a "containment zone" or "TI Waiver Zone." The ROD requires that groundwater outside this zone be restored to drinking water standards. The waiver was issued for the defined containment zone due to the technical impracticability of attaining such standards within the containment zone. The discussed Gage Aquifer TCE contamination presently lies *beneath* the containment zone in an area for which the in-situ drinking water standard is not waived.

hydropunch and new well sampling results from the very recent borings/wells drilled by Shell<sup>5</sup>. Boeing provided data to RWQCB-LA and to EPA for its monitoring wells located at the Boeing property.

In electronic mail correspondence of September 20 and September 28, 2004, EPA requested a meeting with you to discuss the installation of the Gage Aquifer monitoring wells. EPA explained there and in phone conversations that EPA's time was growing short in terms of the need for the data from these wells within the remedial design process. On October 5, 2004, EPA, Boeing and RWQCB-LA held a technical conference call with contractors attending. EPA again explained its reasons for requesting the installation of the Gage Aquifer wells by Boeing. In this call, Boeing raised several technical and allocation issues regarding EPA's need for the wells, which EPA believes it addressed during the discussion. EPA then received your email of October 12 in which you largely reiterate the same technical challenges in writing.

# **Response to Your October 12 Email**

Below, EPA provides responses to several specific points made in your email. However, before doing so, we provide several general responses for your consideration.

# General Responses

1. **Defer and Delay.** Your email states that EPA and/or RWQCB-LA should complete investigations at facilities that lie between the Boeing property and former Del Amo plant such as the former Amoco and Trico facilities, and the current American Polystyrene, ECI, and Mighty Enterprises facilities (hereinafter, *east-of-Normandie facilities*), before Boeing installs any additional wells, and infers that this may take several years. Also, while not saying that it refuses to install the requested wells, Boeing continues to refer to an extended need to study the data before deciding whether to install the wells. For reasons we will discuss, these statements suggest to EPA that Boeing is attempting to defer and delay the decision on well installation.

EPA has made clear in its correspondences since May that there is no reason to delay the installation of the Gage wells, because data from these wells is necessary regardless of the findings of other investigations<sup>6</sup>. While we believe that the investigations at the east-of-Normandie facilities should continue, there is no plausible reason to hold up installation

<sup>&</sup>lt;sup>5</sup>Within the last two weeks EPA has received data from two Gage Aquifer wells newly installed by Montrose. Samples from Well G-21, near Normandie Avenue and just north of the former Montrose plant, showed 480 ppb TCE. Samples from new Well G-20, just northwest of the former Montrose plant and downgradient of part of the Boeing property and the former ILM Facility, showed non-detect (<2 ppm) for TCE, although Well BF-34, in the Bellflower Sand ("C" Sand") above Well G-20, now show 1900 ppb TCE.

<sup>&</sup>lt;sup>6</sup>See also item number 3 of this list, below, for more discussion on why the need to characterize and monitor the contribution from Boeing is inevitable.

of Gage wells downgradient of the sources at the Boeing property. We find Boeing's suggestion that we incur such a needless delay uncooperative.

- Migrating Contamination Not Confined to Property Boundaries. EPA 2. acknowledges, as is mentioned in your email, that Boeing has conducted investigation and some remedial actions in the Upper Bellflower Aquitard at the Boeing property with the oversight of RWQCB-LA. However, Boeing's work has been limited to the Boeing property. Also, no groundwater monitoring wells have been installed in the Gage Aquifer by Boeing (neither on- nor off-property), and the source cleanup measures that Boeing has implemented are focused on the Upper Bellflower Aquitard. There has been no investigation of the Boeing-related contaminants which have already moved off the Boeing property, nor investigation of whether such contaminants have moved into the deeper units (such as the Gage Aquifer) and may be continuing to migrate off the Boeing property.<sup>7</sup> In this case, such migration would continue to carry Boeing contaminants into the primary areas for which EPA has been designing the complex Dual Site Groundwater Operable Unit Remedy. While Boeing's work under RWQCB-LA so far has not extended outside of the Boeing property, it is contamination that has migrated or may migrate in the future from the Boeing property which is the primary concern to EPA vis à vis the selected Superfund remedial actions. While EPA believes that the particular property-focused activities Boeing is conducting should continue, it cannot be assumed that the Boeing property boundary provides an impassable cordon around contamination emanating from Boeing property contaminant sources.8
- 3. **Investigation at "Other Sources" and Finding "the Source."** Your email implies that EPA is focusing on Boeing and not on other potential sources of TCE contamination, including the east-of-Normandie Avenue facilities. It states that very little investigation has been done in the east-of-Normandie areas. And, it characterizes the objective of investigation in the area as finding <u>the</u> source of the TCE in the Gage Aquifer. Your assertions, however, are not true.

First, while more investigation may be warranted, we disagree that very little investigation has been done and information is available about TCE in groundwater near the east-of-Normandie facilities. While the RWQCB-LA has only recently resumed investigation in this area, it should be noted that (1) many wells were installed and

<sup>&</sup>lt;sup>7</sup>It is noted that TCE in its pure form is a dense nonaqueous phase liquid (DNAPL), which has the potential to migrate downward from shallower to deeper hydrostratigraphic units (HSU) under the contaminant source. After arriving at a particular HSU, TCE can dissolve and move away from the source in the groundwater. Even if there is no TCE present as NAPL, as there can be downward vertical gradients in this area, dissolved TCE can move away in a shallower HSU and then sink, or "cascade," into a lower HSU. This provides two potential mechanisms for TCE arrival in the Gage Aquifer.

<sup>&</sup>lt;sup>8</sup>It is noted that the Boeing property lies directly adjacent to the Montrose Chemical Central Processing Area ("CPA"), the primary contaminant source at the Montrose site. Also, the identified TCE sources at the Boeing Building 2 and C-6 Facility is only about 1000 feet from the CPA.

sampled in the shallower units at these facilities in previous years, and (2) Montrose and Shell have installed many monitoring wells, in all units (down to and including the Gage Aquifer) downgradient and side-gradient of these facilities during the Superfund investigations, and these wells are monitored for TCE, the other aliphatic solvents, and numerous other contaminants. Parties associated with the former Trico and Amoco facilities have installed and sampled 12 water table wells within their former properties. Shell and Montrose have installed (and have many years of sampling data in most cases) no less than 15 monitoring wells in the water table, 5 monitoring wells in the Bellflower Sand (MBFC Sand), and 3 monitoring wells and one hydropunch sample in the Gage Aquifer that are either on, or potentially down-gradient of, the east-of-Normandie facilities. Results from these wells have provided a good deal of information and understanding about the distribution of TCE in all the pertinent hydrostratigraphic units, and EPA has presented and discussed this with Boeing.

While these wells have provided significant data, investigation at the east-of-Normandie facilities (including, actually, additional potential sources on the Del Amo plant property) is not complete. EPA is presently overseeing additional well installation and well sampling activities that are being performed by Shell to further advance the understanding of TCE in this area, RWQCB-LA has issued recent orders to these facilities to resume sampling and obtain data, and additional well installations are being considered by both RWQCB-LA and EPA for this area. Still, independent of these investigations, there is more than sufficient information to suggest that a contaminant contribution from the Boeing property needs to be further evaluated and therefore the Gage Wells requested of Boeing are warranted. There is no reason to perform investigation at the facilities serially rather than concurrently.

Second, we disagree with implications that EPA's well installation request represents an unreasonable or unbalanced focus on Boeing. At the Amoco/Trico area, we have required the placement of monitoring wells downgradient of the known TCE source at that location to assess the extent of migration of dissolved phase contaminants. We are approaching Boeing no differently. Portions of the former Boeing property constitute known and significant sources of TCE to groundwater with more than 10,000 parts per billion ("ppb") TCE near the source areas<sup>9</sup>. Dissolved phase concentrations exceed 1000 ppb TCE in the Bellflower Sand (MBFC Sand), overlying the Gage Aquifer, just upgradient of the location where TCE occurs in the Gage Aquifer beneath the containment zone. There are now *two* Gage wells downgradient of the Boeing source, G-14 and G-21, that have TCE concentrations of 120 ppm and 480 ppm, respectively. It is reasonable to assess the contribution from the TCE source at the Boeing property upgradient of the containment zone.

<sup>&</sup>lt;sup>9</sup>The maximum contaminant level ("MCL"), or drinking water standard, for TCE is presently 5 ppb, and new data indicate that TCE toxicity is 65 times greater than was presumed at the time the MCL was issued.

Third, in using such terms as "the source," your email appears to imply, perhaps due to a focus on liability allocation, that if another TCE source exists, then the Boeing property is not a source. However, both Boeing and other sources could contribute to the TCE contamination. While we cannot rule out TCE contributions from other sources to the contamination being observed in the Gage aquifer (for instance, in wells G-14 and G-21), even if other sources were identified, significant data point to a contribution to the Gage aquifer from the Boeing property. Based on the existing data, it is more likely that sources at the Boeing property are contributing to the contamination seen in wells G-14 and G-21 than that the east-of-Normandie facilities are contributing (though both could be contributing and contribution from one does not rule out contribution from the other). We give more details on this in our specific responses, below.

EPA does not agree with Boeing's technical argument that contamination at monitoring well G-14 is more likely due to a somewhat contorted migration pattern from the Trico/Amoco area than from the Boeing property (we will explain why in the next section of this letter). Regardless, the contribution from the Boeing property needs to be further assessed and understood, either way.

# Specific Responses

The following responses take excerpts from your email and respond to them specifically. EPA's response follows each excerpt.

## 1. Your email:

Regarding the evaluation of existing data to determine if additional drilling is necessary it appears that the request to drill Gage wells at C-6 is based on a single sampling event at Del Amo performed in early-2004. This sampling event shows detectable TCE in three Gage wells at Del Amo southeast of both C-6 and the East Normandie Sites. A review of the historic database indicates that this is the first detection of TCE in two of the wells (G-17 at 15 ug/l and SWL-0034 at 8.7 ug/l) and that additional sampling events have not been performed to confirm these results. The third well, Well G-14 first sampled in 1993, had increasing concentrations until 1997 where a maximum TCE concentration of 240 ug/l was reported. TCE concentrations have steadily decreased since that time and the concentration from the most recent sampling event is 120 ug/l. This decrease in TCE concentrations in the last 6 years is an indication of a rapidly depleting upgradient source which is inconsistent with conditions at C-6 or the known plumes at the East Normandie Sites. An alternative explanation for the observed concentration trend at Well G-14 is cross-contamination of the Gage aquifer during drilling. Additional sampling events over a period of time may indicate that there are no significant TCE impacts in the Gage beneath Del Amo.

EPA Response: The request to drill Gage wells at the eastern boundary of the Boeing property is based on 10 years of monitoring data at well G-14 located downgradient of the C-6 Facility (and/or other Boeing property sources), groundwater sampling data taken by Boeing in units above the Gage Aquifer, the proximity and alignment of the Boeing property, new data from well G-21, and multiple sampling events from most surrounding wells. It is therefore not based on "...a single sampling event at Del Amo performed in early-2004," as you state in your email. Well G-14 consistently showed the presence of TCE since it was first sampled in 1993. The concentrations of TCE in this well have increased over a 10-year period from about 50 to 60 parts per billion (ppb) between 1994 and 1995 to as high as 240 ppb in 1998. While the concentrations of TCE in this well fluctuated between 1997 and 2004 (130 ppb in 1997, 240 ppb in 1998, 180 ppb in 1999 and 2000, and 120 ppb in 2004), we disagree that the data support the conclusions of a decreasing trend in TCE concentrations and, even more so, a "...rapidly depleting upgradient source." The fluctuation of TCE concentrations observed in well G-14 is not uncommon and may be attributed to small fluctuations in the groundwater flow direction in this aquifer.

We also disagree with the alternative explanation presented by Boeing suggesting that cross-contamination of well G-14 occurred during drilling. For the last 9 years (since 1995), only low TCE concentrations (about 5 to 17 ppb) were detected in the water table well MW-27, and no TCE was detected in Bellflower Sand well BF-19, both of which are located near and completed in units above well G-14. In addition, an elevated concentration of TCE (480 ppb) was detected in Gage Aquifer well G-21, located near the C-6 Facility, downgradient of the Building 2 Source Area at the Boeing property. The data strongly indicate the presence of TCE in the Gage Aquifer migrating away from the Boeing property. Therefore, the extent of the contamination needs to be further assessed and the upgradient contribution from the Boeing property defined.

## 2. Your email:

Wells at C-6 typically contain both TCE and 1,1-DCE. Samples from Well G-14 at Del Amo have not contained 1,1-DCE but have instead contained 1,2-DCE. 1,2-DCE has been detected in groundwater beneath one of the East Normandie Sites.

EPA Response: Your argument appears to be that there is a "chemical signature" for the chlorinated solvents, usually found at the Boeing property in terms of the isomer of DCE commingled with TCE, and that the contamination currently found in the Gage Aquifer appears, according to Boeing, to have a different signature. We believe that this type of chemical signature analysis is inconclusive. There are many reasons, other than wholly distinct sources of TCE, that could result in the observed occurrences of the isomers of DCE. Among these are differential rates of migration and chemical degradation of TCE and 1,1-DCE. We note that wells at the C-6 Facility that typically contain TCE and 1,1-DCE are primarily screened in the Bellflower Aquitard (i.e., water table and

Bellflower Sand). 1,2-DCE was detected in well G-14 at very low concentrations. We note that while TCE was present in well G-14 since it was first sampled in 1993, 1,2-DCE was not detected in this well until 1998. Similar to well G-14, Gage well G-21 located beneath the C-6 Facility contains elevated concentrations of TCE, but does not contain 1,1-DCE. This is true even though well G-21 is directly under the C-6 facility, is significantly farther from the east-of-Normandie facilities, and significantly cross-gradient from them. While we understand that the low concentration of 1,2-DCE observed at Well G-14 may ultimately be attributed to more than one source, it does not eliminate the need to assess the potential upgradient source(s) of TCE at the eastern boundary of the C-6 Facility, and does not rule out the possibility that the TCE in this well came from the Building 2 Area/C-6 Facility at the Boeing property.

## 3. Your email:

Historic monitoring data has shown a southwest gradient in the Bellflower beneath the East Normandie Sites towards C-6. There is insufficient data from the East Normandie Sites to evaluate potential sources and the lateral extent of contaminants within the Bellflower. There is the potential that TCE has migrated within the Bellflower from the East Normandie Sites to a point near or beneath C-6 where it could then migrate downward to the underlying Gage.

EPA Response: The shallow contamination at the former Trico and Amoco sites, during some time period in the past, could have migrated in the water table aquifer in a southwesterly direction towards the C-6 Facility boundary. However, because of the consistent non-detect concentrations of TCE observed in Bellflower Sand well BF-19, downgradient of the southwest corner of the former Trico site, it is unlikely that this contamination has migrated into the Bellflower Sand at that location. As a result, it is also unlikely that contamination from the former Trico and Amoco sites is the source of the TCE contamination observed in Gage well G-14. This is further supported by elevated concentrations of TCE (480 ppm) observed in well G-21 beneath the C-6 Facility, cross-gradient from the former Trico and Amoco sites.

If Boeing believes that the theory of contaminant migration from these sites in a southwesterly direction should be investigated further, Boeing could do so during the installation of the Gage Aquifer wells, using hydropunch sampling of the water table aquifer, Bellflower Sand, and the Gage Aquifer at the eastern boundary of the C-6 Facility, at a location adjacent to the southwest corner of the former Trico site (i.e., at the location of one of the requested Gage wells).

#### 4. Your email:

Montrose will be implementing a pilot test beginning next year and the data from the requested Gage wells are not necessary for the design or implementation of this test. However, it would seem that the

information from the pilot test is critical for design of the Dual Sites remedy but adequate data from the pilot test won't be available for a year or more. A stepwise assessment of source areas and the Bellflower beneath the East Normandie Sites is critical to the understanding of conditions in the Gage. Data from these sites would seem more important for the Dual Sites remedy than data from C-6. This data is critical for evaluating the need for and the potential location of Gage wells at C-6. A thorough assessment of the East Normandie Sites will not be complete for a year or more.

EPA Response: To the contrary, evaluation of upgradient sources of the TCE contamination in the Gage Aquifer should be conducted on a parallel track with other data acquisition programs, to avoid schedule delays for the final design, to aid in the comparability of the data, and to ensure that contingency planning can be completed as soon as is possible. While the pilot test data may not be available until 2005, other data acquisition results are currently being evaluated and incorporated into the remedial design model. EPA may perform some TCE simulations before the completion of the pilot test. The results from these wells could lead to discovery of previously unknown or undocumented contamination that would take more time to characterize sufficiently to determine how it could be contained and how it might move in response to pumping in the remedial action. In addition, as discussed previously, it does not appear based on the existing monitoring data that the former Trico and Amoco sites are the sources of the TCE contamination in the Gage Aquifer at the location of wells G-14 and G-21. However, if hydropunch sampling results were to indicate that elevated TCE concentrations are present in the deeper units (Bellflower Sand and the Gage) at the southwest corner of the former Trico site, then additional wells would be required to assess the extent of this contamination. Putting off the acquisition of inevitably needed data can only result in needless delays to the remedial process.

## 5. Your email:

The potential location of injection wells has been suggested as a reason to expedite the requested work. However, it would seem that there are only two logical locations for injection wells and the results of the requested wells at C-6 would not be a factor in selecting locations. Injection wells can either be installed along the edge of the Dual Sites to separate the Dual Sites from the neighboring sites or they can be installed beyond any local impacts within the Gage. It is already been established that the Gage beneath C-6 contains TCE from the upgradient former International Light Metals facility (ILM) so if injection wells were to be installed beyond the impacts they would need to be installed north and/or west of ILM. Thus, the results from the requested C-6 Gage wells do not seem pertinent to locating injection wells.

EPA Response: The results from the requested Gage Aquifer monitoring wells are pertinent to more than just the placement of injection wells. Rather, date from these wells are pertinent to the overall remedial design for the Dual Sites, which will have to address the TCE contamination. Knowing the sources and the extent of TCE contamination will assist in the evaluation of what would be required to contain the TCE contamination if necessary, and whether that containment would be different from those designed to contain the chlorobenzene and benzene plumes. Putting off the acquisition of inevitably needed data can only result in needless delays to the remedial process.

# 6. Your email:

Based on our initial analysis of the existing data as summarized above we recommend the following course of action:

One or more rounds of additional sampling of the Gage wells at Del Amo to better evaluate the initial TCE detections in 2004 at Wells G-17 and SWL-0034 and the steadily decreasing TCE concentration in Well G-14.

EPA Response: We disagree with this analysis for reasons already discussed above. EPA's request to drill Gage wells at the eastern boundary of the C-6 Facility is based on 1) 10 years of monitoring data at well G-14 downgradient of Facility C-6 and Building 2, 2) groundwater sampling data collected by Boeing in the overlying units, 3) data from years of sampling at most surrounding and overlying wells, 4) the Boeing property proximity and history, and 5) two samples at new well G-21 located beneath the C-6 Facility. It is not based on "...a single sampling event at Del Amo performed in early-2004" as you suggest in your email. Additional sampling of the Gage wells at Del Amo is not required prior to the installation of the requested Gage wells at the C-6 Facility boundary. As discussed, we believe the existing data cannot be used to support a conclusion that concentrations in Well G-14 are decreasing, contrary to Boeing's interpretation.

# 7. Your email:

[We recommend] Further evaluate the source of TCE in the Bellflower in the vicinity of Well SWL-0003 at Del Amo that had a TCE concentration of 3,900 ug/l during the most recent sampling event. Given the varying historic flow directions in the Bellflower this may be related to the TCE concentrations in the Gage at Well G-14.

EPA Response: As discussed at length above, based on the consistent non-detect concentrations in well BF-9, and the generally southwesterly groundwater flow direction in the middle Bellflower B-Sand and C-Sand wells, the TCE contamination in well SWL-0003 and at the former Trico and Amoco sites is not likely related to the Gage contamination in wells G-21 and G-14. The installation of the requested Gage wells

downgradient of Facility C-6 can and should proceed concurrently but independently from investigations at these sites.

## 8. Your email:

[We recommend] Additional assessment of the East Normandie Sites to evaluate potential sources, flow directions and the extent of groundwater impacts within the Bellflower. The LARWQCB is actively pursuing the completion of this work.

EPA Response: RWQCB-LA has agreed with EPA to approach the east-of-Normandie facilities in a co-lead fashion. The former Trico and Amoco facilities are *inside* the containment zone for the Dual Site Groundwater operable unit, and EPA's ROD provides remedial actions that apply to them. The RWQCB-LA continues to pursue investigations at these facilities; EPA will, in coordination with RWQCB-LA, pursue investigations and actions as appropriate to address the groundwater impacts on EPA's remedial design and action.

The fact that there are ongoing investigations at other facilities in the area is certainly *not* a supportable reason to defer or delay installation and sampling of wells in the Gage Aquifer downgradient of the pertinent Boeing property sources; <u>especially</u> given that these Gage wells will be needed to evaluate the Boeing contribution to the Gage Aquifer regardless of the results of the other investigations. "Additional assessment" of other sites does not obviate the need for the Gage wells. The installation of the requested Gage wells can and should proceed concurrently but independently from investigations at these sites.

## 9. Your email:

[We recommend that ] Once the above work is complete a technically reasonable and equitable plan for further assessment of the Gage can be completed and performed. We believe that this phased assessment approach will minimize the amount of work ultimately required thus minimizing impacts to the new owners and their tenants at the C-6 site and result in a robust monitoring well system. This approach is consistent with the direction of the LARWQCB who has directed the various East Normandie Sites to perform additional assessment and who is seeking to implement consistent and comprehensive oversight of both C-6 and the East Normandie Sites.

**EPA Response:** The installation of the requested Gage wells would be part of any "reasonable and equitable plan" for further assessment of the Gage Aquifer with respect to TCE. The Boeing property is the most-likely source to be contributing to the TCE contamination in the Gage Aquifer. As discussed previously, there is no reason to defer installing these wells just because there are other investigations in the area. We are

approaching this realistically from the standpoint of obtaining needed information concurrently from a number of sources and investigations.

# Request for Reconsideration of EPA Request for Gage Aquifer Wells

Based on the preceding discussions, EPA requests that Boeing reconsider installing the requested Gage Aquifer monitoring wells. EPA requests that Boeing provide EPA a written response as to whether it will agree to install the monitoring wells by November 12, 2004. This will allow EPA to make contingent plans as may be necessary to install the wells. If EPA installs the Gage Aquifer monitoring wells, it will incur significant response costs under CERCLA in doing so.

We welcome your cooperation and continued attention to this matter. If you have any questions about the contents of this letter, please contact me at (415) 972-3020.

Sincerely,

Jeffrey A. Dhont

Remedial Project Manager

Superfund Division

cc:

Stephanie Sibbett, Boeing Salvatore Stavale, Boeing John Geroch, RWQCB Safouh Sayed, DTSC Natasha Raykhman, CH2M Hill